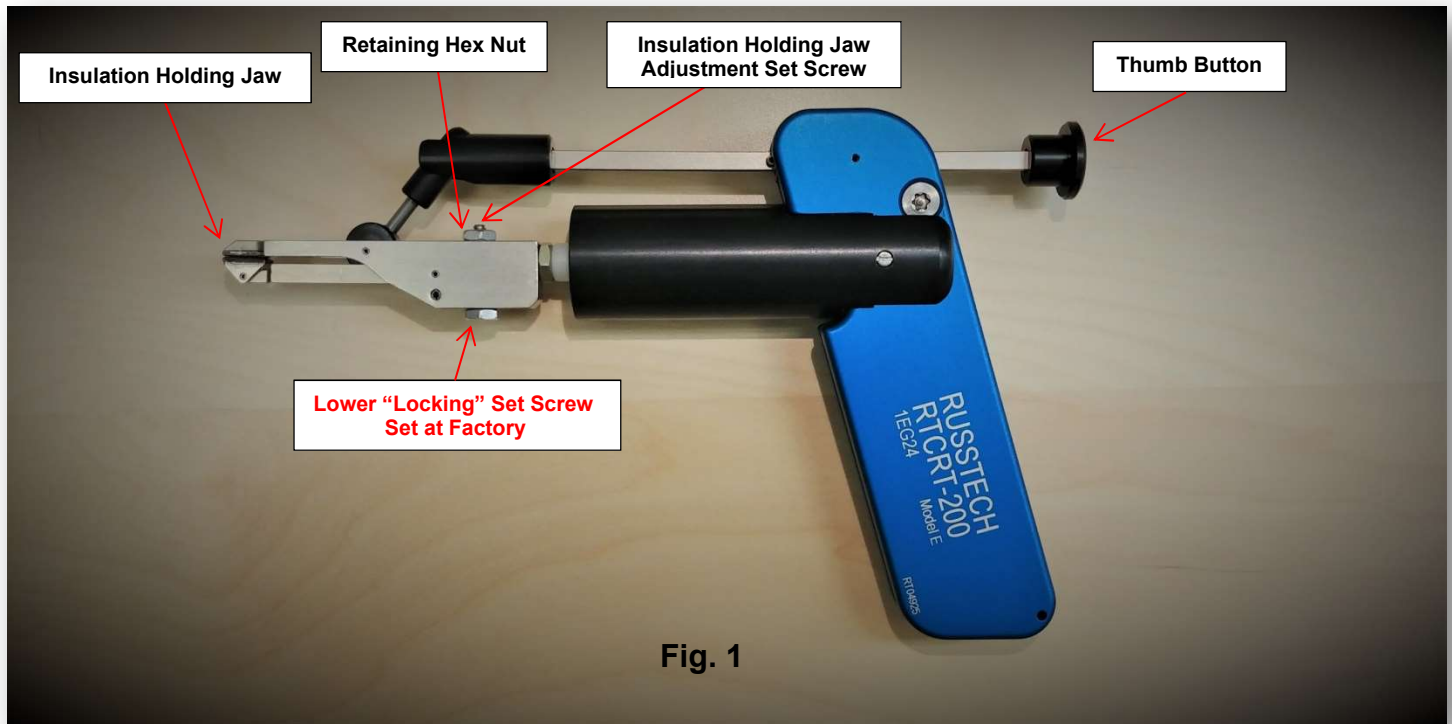


RTCRT-100 and -200 Model E Module Block Retention Test Tool

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INTRODUCTION

The RUSSTECH Module Block Retention Test Tool (RTCRT-100 and -200 “MODEL E”) is specifically designed to check contact retention of rear release contacts in module block receptacles. In the interconnection environment it is often required to operate within tight spaces or access constraints. The RTCRT-100E and -200E have proven to be very useful in these conditions. This tool has many varied uses and may be applicable where other methods of retention test have been unsuccessful.

DESCRIPTION

These ergonomic module block retention test tools have a slim, compact design and come from the factory pre-set at a specific release force pressure, or to your requested custom release force. The tools are held with one hand, have an ergonomic handle and thumb operated push button and are simple to operate. The tools have an adjustable jaw that comes pre-set from the factory and accommodates a wide range of wire and insulation sizes up to 12 AWG. The tools feature a “Tactile-Release” mechanism that ensures safe use every time.

ORDERING INFORMATION

RTCRT-100E (3.0 – 5.0 lbs.)
RTCRT-200E (5.0 – 7.0 lbs.)

*Additional custom pressure settings are available. Contact RUSSTECH ENGINEERING for information.

NEW DESIGN UPDATES (tools sold AFTER 1/20/2018)

Three key improvements have been made to the RTCRT-XXXE series tools.

-Reduced length of holding jaw body and increased outer radii: To reduce tool mass and provide smoother tool surfaces when tool is used in tighter workspaces.



-Addition of Jaw pressure locking set screw (Pre-Set at factory): To increase precision and repeatability of the Insulation Holding Jaw holding pressure.



-Updated gripper pad materials: To allow for more consistent grip during testing and to help eliminate any superficial scuffing of outer wire insulation.



*Legacy RTCRT-XXXE series tools (sold BEFORE 1/20/2018) will not have the above listed features.

PRIOR TO RETENTION TEST

QUICK TIP: Use a sample piece of insulated wire before testing on the production wire/contact assemblies. The Insulation Holding Jaws should grip tight without slipping during the test cycles, but not so tight that deep impressions in the wire insulation are visible.

IMPORTANT: The insulation holding jaw pressure comes pre-set from the factory and should not need to be adjusted. If required, "Set" Insulation Holding Jaw pressure by using the **adjustment set screw** (shown in Fig. 1) and following the adjustment instructions below.

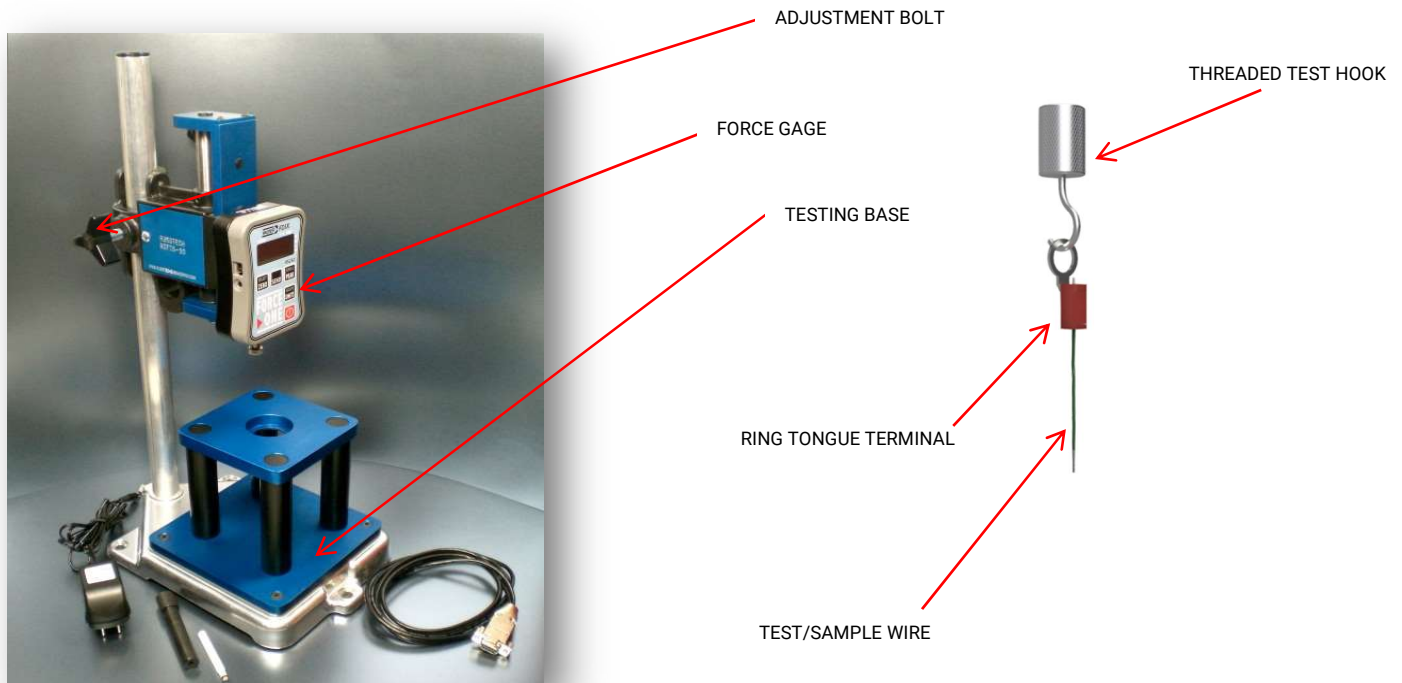
ADJUSTMENT: Begin by loosening the retaining hex nut (shown in Fig. 1), then adjust the holding pressure using a 1/16" allen key by slightly turning the adjustment set screw (Clockwise = Increase pressure) or (Counter-Clockwise = Decrease pressure). Once the desired holding pressure is reached, simply re-tighten the retaining hex nut.

NOTE: The lower "locking" set screw (shown in Fig. 1) is set from the factory and should NOT need to be used to adjust the Insulation Holding Jaw pressure.

HOW TO USE THE RTCRT-200E “MODULE BLOCK” RETENTION TEST TOOL

NOTE: RUSSTECH recommends that the RTCRT module block test tool release force be verified prior to retention testing. Instructions on how to test the release force and how to perform calibration can be found on the following page.

1. Locate the wire/contact assembly to be tested.
2. Open the Insulation Holding Jaws by pressing the thumb button (*shown in Fig. 1*), feed the wire into the Jaw and release the thumb button.
3. While holding the tool in alignment with connector, slowly pull on the tool until the “tactile” release is felt.
 - 3a. This “tactile-release” indicates that the *pre-set pressure has been reached.
 - 3b. Faulty contact retention will not allow the *pre-set pressure to be reached prior to contact disengaging from the connector.



(SHOWN) RTFTS-50 Test Stand

TESTING AND CALIBRATION OF THE RTCRT MODULE BLOCK RETENTION TEST TOOL

1. Setup the RUSSTECH **RTFTS-50** Test Stand with a test hook (threaded onto the force gage) or equivalent testing device and configuration with a "PEAK" feature.
2. Secure the testing base to the edge of a workbench or sturdy, flat table using a large 'C'-clamp or other similar holding fixture.
3. Loosen the adjustment bolt and rotate the top half of the test stand (w/ force gage attached) 90 degrees, so that the force gage is hanging over the edge of the workbench or table. This will provide clearance for the tool during testing.

NOTE: RUSSTECH recommends that a test/sample wire assembly (as shown above) be used for Testing/Calibration of the RTCRT module block test tool.

4. Place the Test/Sample Wire (wire with a ring tongue terminal crimped on one end – as shown above) onto the test hook attached to the force gage by placing the ring tongue terminal onto the test hook.
5. Prepare RTCRT- "Model E" module block test tool for test/calibration by opening the Insulation Holding Jaws and feeding the test/sample wire into the jaws then releasing the thumb button. Let the tool hang freely (*be sure to keep hand below tool to prevent the tool from falling*).
6. **CYCLING TOOL PRIOR TO TEST:** Slowly pull down on the module block test tool until the "tactile-release" is felt then let the tool return back to the test position. Tool should cycle smoothly (no binding or rough feel while cycling tool). Repeat the test cycle three times.
7. **PERFORMING TEST/CALIBRATION:** Let the tool hang freely. Zero the force gage. Slowly pull down on the module block test tool until the "tactile-release" is felt, then let the tool return back to the test position. Press the "PEAK" feature button on the force gage (the force displayed is the tool's release force). Take note of the reading on the force gage. Repeat this step (#7) three times to verify that tool is performing properly and is meeting release force requirements.
8. Any tools not meeting release force requirements shall be re-tested/calibrated.
9. Any tools not passing calibration will need to be returned to RUSSTECH ENGINEERING for repair/refurbishment.

NOTE: RUSSTECH recommends that the RTCRT tools be placed on a 90 day calibration cycle at minimum, or a calibration cycle that is consistent with the each individual tool's usage.